Africa Physical and Cultural Geography Project: Activity 4 - Plate Boundaries, Earthquakes and Volcanoes, Using Published Maps

The Earth is formed of several layers that have very different physical and chemical properties. The outer layer, which averages about 70 kilometers in thickness, consists of about a dozen large, irregularly shaped plates that slide over, under and past each other on top of the partly molten inner layer. Most earthquakes occur at the boundaries where the plates meet. In fact, the locations of earthquakes and the kinds of ruptures they produce help scientists define the plate boundaries.
http://pubs.usgs.gov/gip/earthq1/ In this exercise, you will examine the location and pattern of plate boundaries, earthquakes, and volcanoes around the world. You will add the continents, plate boundaries, earthquakes, and volcanoes to a view. You will also change the symbols representing these features.

Project Steps

Sources **Sources used in this assignment:**

Rand McNally Classroom Atlas. 1997. IBSN 528-17729-X.

Rand McNally Goode's World Atlas. 1995. 19th Edition. LC Catalog Card Number 94-68645.

World Geography Today. 1997. Holt, Rinehart, and Winston. Austin: Harcourt Brace and Company. ISBN 0-03-016802-3.

Step 1 Examine the following maps:

From the *Classroom Atlas:*

Africa political map, page 75.
Africa physical map, page 74.

From *Goode's World Atlas:*

Plate tectonics map and discussion, pages 8 and 9.
Africa landforms map, page 206.
Africa cities and elevation, pages 210-213.

Questions

Question 1 Where are the majority of the earthquakes in the world located in relationship to the plate boundaries? Why?

Question 2 Where are most of the earthquakes in Africa located in relationship to the plate boundaries?

Question 3 A rift zone is where a continent is believed to be spreading apart, but not on a plate boundary. A rift zone causes magma to rise to the surface and erupt in a line of volcenoes. Based on this information, in which African countries is a rift zone located?

Question 4 Compare the location of the plate boundaries and earthquakes along the coast of Africa and along the coasts of North and South America. Do you think this affects the risk from earthquakes to people in North and South America compared with Africa? Why?

Question 5 Where are the majority of the volcanoes in the world located in relationship to the plate boundaries? Why?

Question 6 Based on your maps, which volcano is the highest in Africa?

Think About Notice the location of volcanoes in Africa in relationship to the plate boundaries.

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URL:http://rockyweb.cr.usgs.gov/outreach/africa/act4non.html
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